

GP-304126

## SHIFT INHIBIT CONTROL FOR MULTI-MODE HYBRID DRIVE

## ABSTRACT OF THE DISCLOSURE

An electrically variable transmission has a pair of clutches and a first mode when the first clutch is applied and the second clutch released, a second mode when the second clutch is applied and the first clutch released,  
5 and a fixed-ratio mode when both clutches are applied. Upshifts and downshifts out of fixed-ratio are accomplished in accordance with a control based upon shift confidence factors determined in accordance with proportional and derivative input speed error quantities. Shift cycling is avoided by applying a variety of conditional tests intended to inhibit return to  
10 fixed-ratio operation.